Dysphagia Due To Rare Cause

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Citation

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Abstract

We describe a case of a middle-aged man who presented with dysphagia for more than 10 years. Failure of repeated endoscopy in diagnosing this case and the role of a newer investigative modality i.e. M R angiography is reported with review of literature.

CASE REPORT

A 45-year-old male patient presented to ENT OPD of Lok Nayak hospital with complaints of intermittent dysphagia for solids for last 10 years. There was no history of odynophagia, heartburn, epigastric discomfort, retrosternal pain, or regurgitation and vomiting. In past patient had undergone upper gastrointestinal flexible endoscopy many times in different hospitals, with no conclusion. He was treated with a variety of antacids, antiulcer and motility drugs without any improvement. Barium swallow revealed a posterior indentation of thoracic part of esophagus. On MR argiography an aberrant right subclavian artery arising from the aortic arch distal to the left subclavian artery crossing the midline behind the esophagus was seen (Fig 1 and 2). A diagnosis of dysphagia lusoria was thus established. Patient was treated with prokinetic agents like cisapride but without any relief. The patient refused a surgical management.

Figure 1

Figure 1: Barium swallow showing posterior indentation of thoracic part of esophagus.

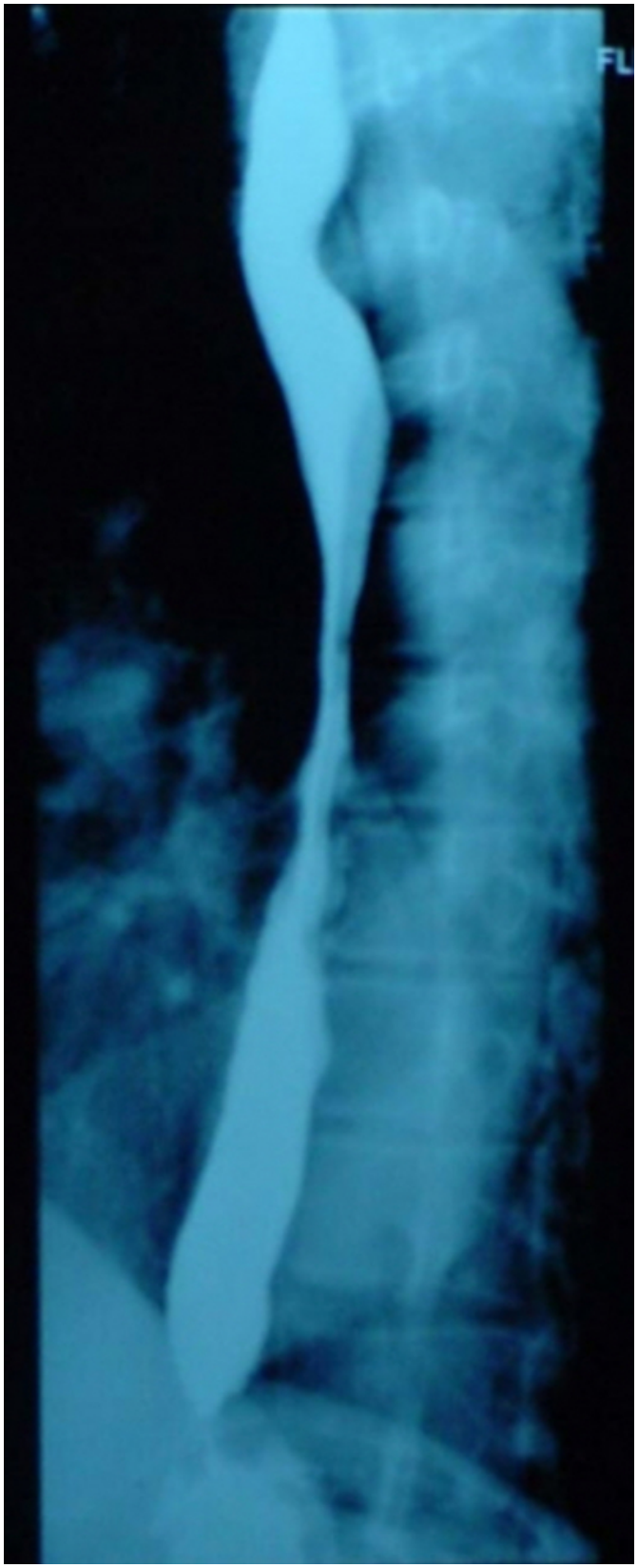
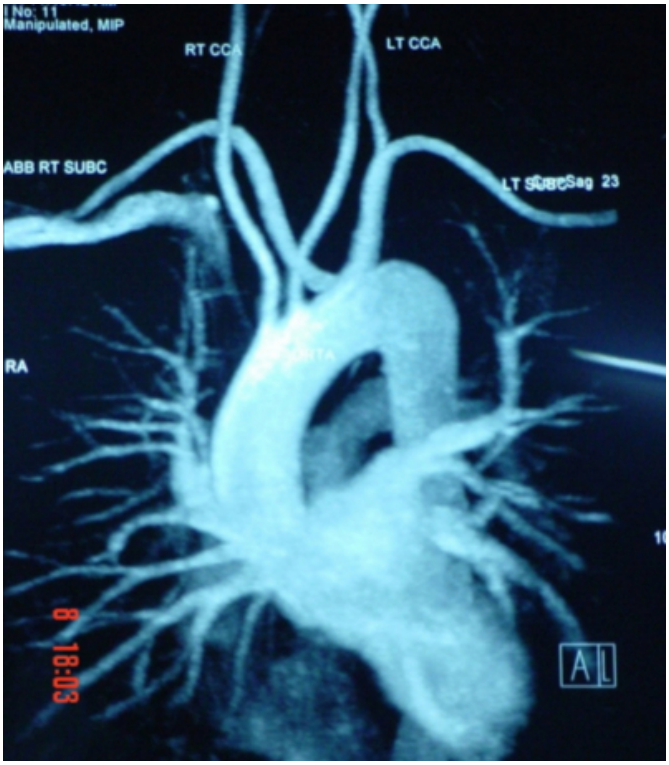


Figure 2

Figure 2: MR argiography showing an aberrant right subclavian artery arising from the aortic arch distal to the left subclavian artery.



DISCUSSION

The right subclavian artery has an anomalous origin in less than 1 per cent of the general population. Fortunately, most of these persons do not have symptoms. However, if they undergo have any neck surgery, they may be at an increased risk for damage to the right recurrent laryngeal nerve. Hunald (1735) reported an anomalous right subclavian artery for the first time[1]. The clinical syndrome of dysphagia lusoria was first published by Bayford (1787)[2]. He did not mention the associated displacement of the right inferior recurrent laryngeal nerve and it was Stedman(1825) described the entire anatomical picture. Dysphagia lusoria is described in the literature as difficulty in swallowing because of a “jest of nature”[3]. The “jest of nature” is a birth defect encompassing any aortic root vascular anomaly that causes esophageal dysphagia. The embryologic abnormality of the aortic arch is involution of the fourth vascular arch, along with the right dorsal aorta, leaving the seventh intersegmental artery attached to the descending aorta. This persistent intersegmental artery assumes a retroesophageal position as it proceeds out of the thorax into the arm. Persons with dysphagia lusoria can be categorized according to their specific subclavian anomaly (i.e. depending on the

presence of an aneurysm, occlusive disease, or esophageal compression). The lusorian artery is a rare anomaly of the right subclavian artery. This artery arises from the aortic arch distal of the left subclavian artery, crossing the midline behind the esophagus. This can result in dysphagia, which appears after the age of 40 years[4]. One of hypothesis for dysphagia lusoria is that it is caused by oesophageal motility disorders and not by vascular compression. This was supported by oesophageal manometric study, which revealed segmental hypoperistalsis and anti-peristalsis and disappearance of dysphagia with cisapride[5].

Mediastinal abnormality may be seen on chest x-ray. Noninvasive imaging of the chest with either computerized tomography or magnetic resonance scanning are excellent methods for evaluating the mediastinum for solid tumors or vascular anomalies that can cause extrinsic esophageal compression[6]. Endoscopy may reveal a pulsating impression in the esophagus. Barium contrast examination of the esophagus shows a characteristic diagonal impression at the level of the fourth thoracic vertebra in all patients[7]. Barium swallow in this case also showed impression, which led us to suspect the vascular anomaly that was confirmed subsequently. Computed tomography and angiography confirms the diagnosis and excludes aneurysms. Stork et al describes a case of aberrant right subclavian artery with coexisting coronary artery disease and proves the role of CT scan and intrarterial angiography and direct catheterization in diagnosis[8]. Manometric investigation of the esophagus usually reveals nonspecific abnormalities. Dysphagia lusoria may be satisfactorily managed by dietary modification when the symptoms are mild.

The operative approach to repair of this condition has been controversial. The condition was earlier treated by division of the aberrant right subclavian artery at its origin through a median sternotomy and translocating the distal subclavian artery to the aortic arch or right carotid artery[9]. An extrathoracic approach is superior to a repair involving thoracotomy because there is decreased rate of complications that may be associated with a thoracotomy and greater visibility of the subclavian and carotid artery[10,11]. Through a cervical approach the artery is ligated near its root and connected with the right carotid artery. Even simple severing of the artery without reconstruction has been described with no ischaemia of upper limb and no symptoms of the subclavian steal syndrome. Our patient refused surgery when complications were explained to him.

CONCLUSION

Dysphagia lusoria is caused by a rare anomaly of the subclavian artery. The diagnosis can be overlooked at endoscopy, but barium contrast study of the esophagus will reveal the abnormality. Manometry cannot be used to diagnose this condition or to predict surgical outcome. Diagnosis is confirmed on CT with contrast study or MR angiography. When the symptoms are intractable, surgical correction should be considered even if coexisting esophageal abnormalities are present.

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